

**WFIA 2009 Fall Conference
Storage Tank Program
November 3, 2009**

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Tanks exempt from Plan Submittal 10.100(1)(b)

- Heating oil < 1,100 gal at 1-2 family residential
- Class IIIB ASTs < 1,100 (non used oil)
- AST storing non flam/comb CERCLA liquids under direct oversight of PE
- Portable tanks not used as fixed tanks
- Farm / construction project ASTs under *Comm 10.630 (simplified submittal)*
- ASTs at mobile power plants
- Used oil ASTs at ARCCP compliant recyclers

Tanks Exempt from Registration

10.140(1)(a)

- (a) ASTs <1,100 gallons and which have any of the following:
 1. Are farm tanks, or are located at and serve a construction project.
 2. Are used to store heating oil or used oil, for consumptive use on the premises.
 3. Are used to store Class IIIB liquids other than used oil
 4. Are located inside a building and are used for industrial processes, if that use occurs through piping which connects the tank to the process.
- (b) Aboveground tanks which are used to store nonflammable or noncombustible federally regulated hazardous substances and which have a capacity of < 5,000 gallons.
- (d) Tank wagons, portable tanks and movable tanks, that are located on a property for less than 24 months.

Tanks Exempt from Listing

10.300(2)(b), 10.400(1)(c), 10.610(2)(e)4

- Tank wagons
- Movable tanks
- Portable tanks (i.e., IBCs)
- Farm tanks
- Class IIIB < 1,100 gal
- Class IIIB \geq listed or acceptable to the department
- Used oil AST < 750 gal if not connected to burner
 - \geq 750 must be listed
- Tank designed by PE under PFV.
- Used oil ASTs at ARCCP complaint recyclers

Inspector has the authority to request construction standard and content compatibility info.

Class IIIB Motor Vehicle Fueling

❖ Tanks < 1,100 gallon capacity

- No plan submittal
- No registration
- Must comply with Comm 10 & NFPA 30 / 30A technical requirements.
 - Components
 - Setbacks
- PFV required to circumvent technical requirements

Will they always be
storing Class IIIB??

Closure Documentation

LPO on site

- LPO typically collects and reviews documents and submits to Madison.

LPO not on site

- Paperwork to Madison may go off track
- If LPO not attending closure is it necessary for remover to send paperwork to LPO?

Suspect closure assessment performance
PECFA Site Review staff on closures

Moving an AST on Property

Comm 10.400(6)

- When submitting plan submittal or an updated or new registration form make sure it is clear that tank is already registered.
- If the tank is relocated to a property with a different street address, a revised tank registration, form ERS-8731 or ERS-10861 E, and part A of a tank-system service and closure assessment report, form ERS-8951, shall be completed and submitted to the department for the former location.

PIF Tank Yank Program

- Funding via ss. 101.1435
 - Any UST used for storing petroleum related product
- Qualifying property
 - Indigent owner
 - Lien placed on property
- Commerce reconnaissance team
- Bid award
- Commerce oversight (No LPO involved)
- Contractors must comply with local permits

Anniversary Date

Transaction ID:	1719630
Facility ID:	698032
Facility:	D & G QUICK MART AND PIZZARIA
Phone:	<input type="text"/>
	131 HWY 141 N COLEMAN, WI 54112
Contact Name:	<input type="text"/>
Permit App Sent Date:	07/28/2008
POS Dispensing:	No
Anniversary Date:	04/30/2009
Dispensers Have	Unknown

Currently the year must be changed from one year to the next by the inspector

Time to disconnect: 29:10

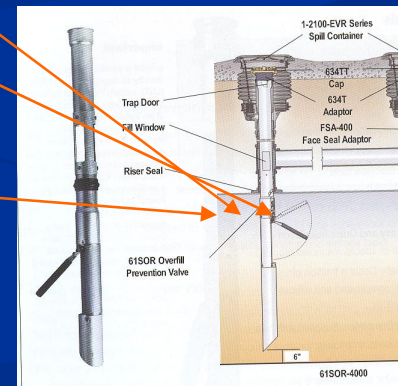
Transaction ID:	1716146
Facility ID:	63528
Facility:	CLARK OIL #364
Phone:	<input type="text"/>
	10355 N PORT WASHINGTON RD MEQUON, WI 53092
Contact Name:	<input type="text"/>
Permit App Sent Date:	08/28/2009
POS Dispensing:	Yes
Anniversary Date:	April
Dispensers Have Sumps:	<input type="checkbox"/>
Actual Inspection Date:	<input type="text"/>
New Site Status:	<input type="text"/>
Compliance Date:	<input type="text"/>
Owner Data:	ETROLEUM - Cust

Implemented changing to month:
"Anniversary Date 1st of : _____"
Allows for a 60 day window

UST Overfill Prevention

Comm 10.505

- ❖ Alert at 90%
 - Alarm (visual & audible)
- ❖ Shut-off at 95%
 - Drop tube flapper valve



Manufacturers are telling us that the 90% alert mechanism must be installed so that the alert is audible via an alarm and visual via a light.

Ball Float Maintained

- Under EPA & initial ILHR 10 regulations ball float should be no higher than 90%
- Mandatory removal versus option to reposition
- Raised above auto shut-off
 - Additional protection
 - Prevent cross contamination

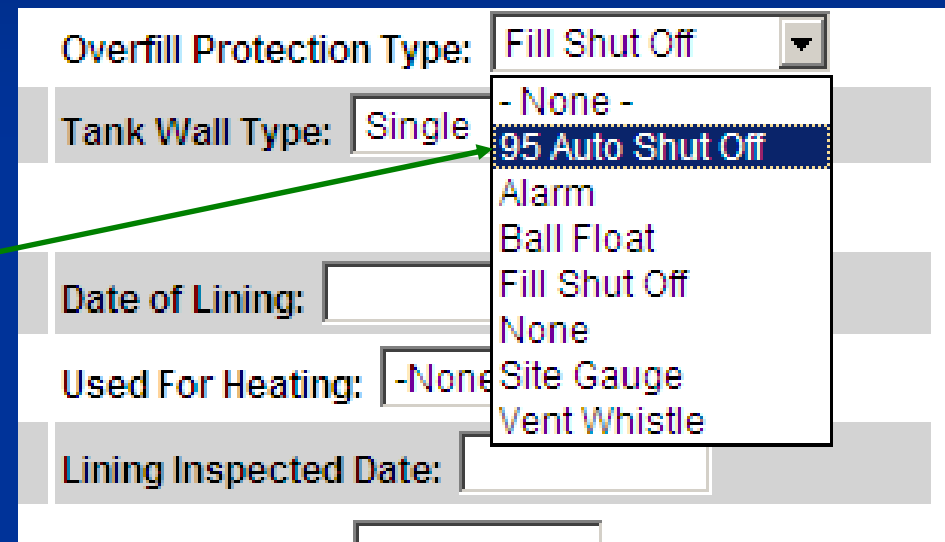
Overfill Prevention

Dependent upon tank / regs

For those requiring:

- Alert at 90% and
- Auto shut-off at 95%

Applies to tight connect delivery transfer



Overfill Protection Type:

Tank Wall Type:

Date of Lining:

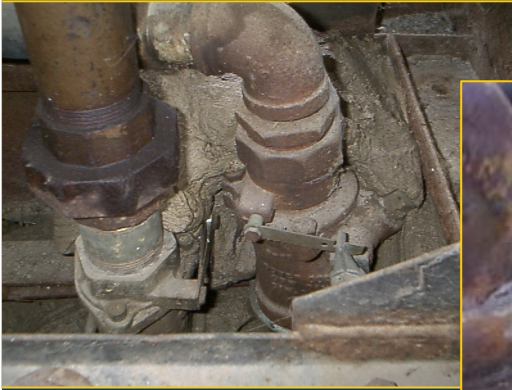
Used For Heating:

Lining Inspected Date:

Dropdown menu options:

- None -
- 95 Auto Shut Off
- Alarm
- Ball Float
- Fill Shut Off
- None
- Site Gauge
- Vent Whistle

Form – in – place Sump



Questions to ask contractor:

- What is the guarantee or warranty period?
- Will dispensers be removed for the work to be performed?
- How will existing sump be cleaned?
- How will metal components be cleaned?
- How will uniformity of thickness be achieved?
- Will the sump be constructed to accommodate the sump sensor?
- Will you provide photos of sump reflecting condition before you add the coating?
- How will post installation tightness test be performed?
- What happens if sump does not pass tightness test?
- What documentation is furnished?

Dispenser Sump Sensor

Comm 10.500(5)(f)

Sensor not retroactive for existing liquid tight sumps



Electronic non
discriminating sump
sensor:

(Senses product and
water)

What it has to do options:

- a) Alert (audible or visual), or
- b) Shut-down (dispenser or pump)

What needs containment



No tank top containment
– they need containment
&
a sump sensor



- Sump
- Sump pan
- Form in place



No under dispenser
containment – they need
containment
&
a sump sensor



If operator had this type of
containment by Feb 1, 2009,
they don't need a sensor

Plan submittal not
required for sensor
unless it changes
primary leak detection
method.

Dispenser base – Sump configuration

Does the sump have to provide containment for the entire footprint of the dispenser?



- ❖ Dispenser design has changed with new models.
- ❖ Facilities have upgraded dispensers on old islands with no relationship between dispenser and sump or mounting provisions.
- ❖ Sump upgrade is intended to eliminate significantly impervious areas.
- ❖ Requiring a full dispenser footprint coverage would result in sump being wider than the mounting frame

Sump Upgrade Verification

Dispenser Sump Facility Home Page

Transaction ID: 1719630
Facility ID: 698032
Facility: D & G QUICK MART AND PIZZARIA
Phone:
131 HWY 141 N
COLEMAN, WI 54112
Contact Name:
Permit App Sent Date: 07/28/2008
POS Dispensing: No
Anniversary Date:
Dispensers Have Sumps: **Unknown**
Actual Inspection Date:
New Site Status:
Compliance Date:

“Unknown” is the default

Tank-top Sump Respective tank page

Tank Attributes

Tank ID: 200776

Overfill Protection: Required - Installed	Overfill Protection Type: Fill Shut Off
Spill Containment: Required - Installed	Tank Wall Type: Single
Containment Sump Installed: Unknown	
Tank Contents: Diesel	Date of Lining: <input type="text"/>
Fuel Grade: -None Selected-	Used For Heating: -None Selected-
<input type="checkbox"/> Vehicle Fueling	Lining Inspected Date: <input type="text"/>
<input type="checkbox"/> Manifolder	Related Tank Id: <input type="text"/>
<input type="checkbox"/> POS Dispensing	Tank Status Code: In Use
Tank Closure Ordered By: <input type="text"/>	Tank Closure Order Date: <input type="text"/>
-None Selected-	

Assumption

Inspector understands what system components require a containment sump.

“YES” - all the dispensers that require sumps have them installed

“NO” - all the dispensers that require sumps DO NOT have them installed

“NOT REQUIRED” – None of the dispensers require sumps

Product Color Coding

10.230(12)

(12) Product color coding for fill pipe caps and manhole covers.

(a) *General.* 1. All fill pipe caps and manhole covers for underground fuel tanks at distribution terminals, bulk plants and motor fuel dispensing facilities shall be identified by the standard color and symbol coding in API 1637.

(b) *Location of identification.* 1. The color coding required in par. (a) shall be applied to the fill pipe cap and manhole cover or within the spill containment.

2. At all facilities with more than one tank, the color coding applied to the fill cap or manhole cover shall extend at least 12 inches beyond the edge of the cap or cover onto adjacent concrete or pavement.

2 Options:

- Paint, or
- Tag



Component Listing, i.e. UL

- Comm 10 and the respective standards require certain components to be “Listed.”
- *Listing verifies that component/device has been evaluated by a recognized organization with respect to its designed and construction for an intended use and installation.*
- *The Listing mark applies to the product as it is originally manufactured when shipped from the factory.*
- *The listing does not extend to components that may be necessary for functionality, but added after the listed component is shipped from the factory.*
- *The listing is not extended to modifications that may occur after it leaves the initial manufacturing process.*
- *UL does not require that the Listing mark/label be removed or modified if modifications are performed on the original UL Listed product.*
- Comm 10 and the respective standards do not require that the Listing be maintained.
- Standards, i.e., NFPA 30A allow listed equipment to be modified via “Listed By Report” or modification approved by the AHJ.



Portable Tank

Comm 10.050(k) “Portable tank” means an aboveground closed vessel that has a liquid capacity of 110 gallons or more; is not otherwise defined in this chapter; is equipped with skids, mountings or accessories to facilitate handling of the tank by mechanical means; and is not intended for fixed installation or for highway vehicle fueling; and includes intermediate bulk containers.



Williams Assessment

Site visits

- Opportunity for operational improvement
 - Inspectors
 - Contractors
- Opportunity for better defined inspection policy
 - Defining non compliance
 - Documentation

Complete ??? Inspection

If a sump is filled with water

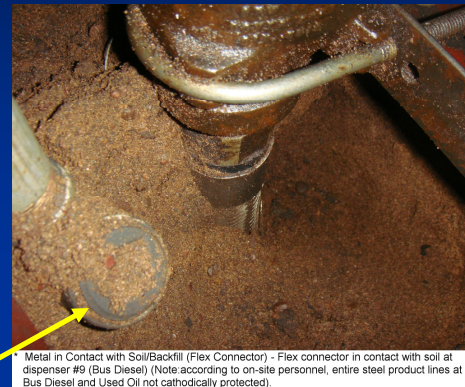
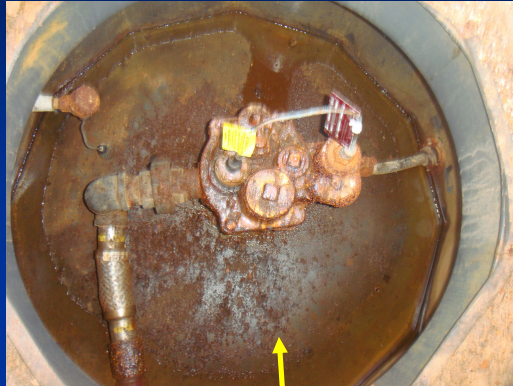
- Is sensor functional?
- Is it in alarm?
- Did operator respond to alarm?
- Metal in contact with water?



Is there:

1 non compliance issue or 4 non compliance issues???

Corrosion Protection



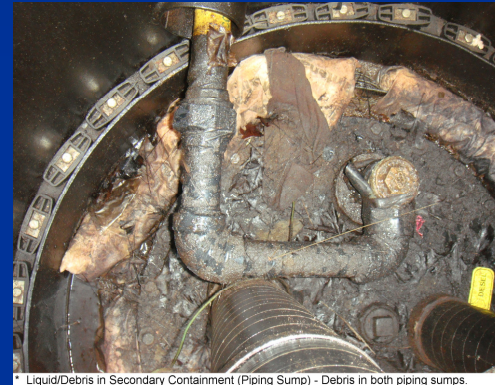
Comm 10.520 Operation and maintenance of corrosion protection. (1) General. (a) *Where required.* Vent lines, vapor lines and any portion of a single or double-wall tank system, whether new or existing, that routinely contains product and is in contact with the ground or with water shall be protected from corrosion by one of the following methods:

Debris in sumps

- At what point is it not acceptable / non compliant
- Is the source a factor (i.e., fuel vs. water; groundwater vs. surface water)??
- Can debris in sumps indicate compliance with monthly operator “open the cover” inspections



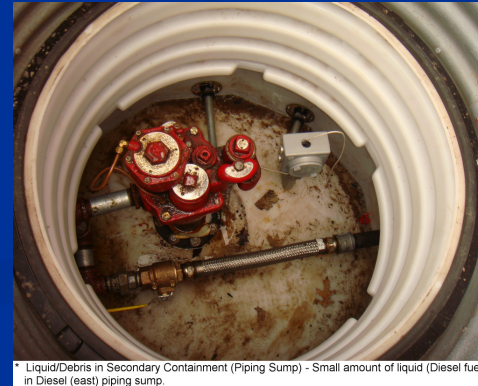
* Liquid/Debris in Secondary Containment (Dispenser) - Liquid in #1 dispenser sump.



* Liquid/Debris in Secondary Containment (Piping Sump) - Debris in both piping sumps.



* Liquid/Debris in Secondary Containment (Dispenser) - Liquid and debris in dispenser sumps.



* Liquid/Debris in Secondary Containment (Piping Sump) - Small amount of liquid (Diesel fuel) in Diesel (east) piping sump.

Contractor Issues

- Shear valve
- Test equipment on valve / not properly plugged

NonSoc	Dispensers and Labeling
<input type="checkbox"/>	COMM 10.400.3.D Dispenser Piping Secondary Containment -AST sys
<input type="checkbox"/>	NFPA 30A.6.5.2 Dispensing - Breakaways required on Class I & II
<input type="checkbox"/>	NFPA 30A.6.3.5 Dispensing - Distance of Heating Fuels Dispensers
<input type="checkbox"/>	NFPA 30A.6.5.1 Dispensing - Listed Hose and Length Maximums
<input type="checkbox"/>	NFPA 30A.6.3.3 Dispensing - No control that adequately activates o
<input type="checkbox"/>	NFPA 30A.6.3.4 Dispensing Device Shall Be Mounted & Bolted On
<input type="checkbox"/>	NFPA 30A.8.3.5 Dispensing area - Electrical Requirements
<input type="checkbox"/>	NFPA 30A.6.3.2 E85 Dispenser - Containment and sump sensor/ tri
<input type="checkbox"/>	COMM 10.605.1.E.5 Hose or fitting replacement
<input type="checkbox"/>	COMM 48.580.1.A Minimum Octane Rating Shall Be Posted
<input type="checkbox"/>	COMM 48.580.1 Name & Grade Labels (including ethanol)
<input type="checkbox"/>	NFPA 30A.6.6.2 Pre-Pay etc. Nozzle Device Requirements
<input type="checkbox"/>	NFPA 30A.6.7 Self-Service - Emergency Controls No More Than 1
<input type="checkbox"/>	NFPA 30A.9.2.5.4 Service Stations Signs - No Smoking and Unappro
<input checked="" type="checkbox"/>	NFPA 30A.6.3.9 Shear Valve installed properly



* Improper Piping Installation (Dispenser) - Test equipment/fitings installed in emergency shear valves (not properly plugged) under #1/2 dispenser.

“ . . . The emergency shutoff valve shall be installed in accordance with the manufacturers' instructions. . . . ”

Inspector ??? Issues

Inspector assessment

- Damaged caps
- ATG caps not sealed
- Programming – date/time
- Access covers / collars / adaptors
- Entry boots
- Leaks
- Sensor functionality



* Fill Pipe Cap Replacement - Damaged fill pipe cap on Diesel tank



* Secondary Containment Monitoring Compromised (Piping Sump) - Conduit entry boot clamp loose in Diesel pipe sump.



* Missing/Damaged Drive Plate Lid at Tank - Drive plate ring damaged at submersible pump manway at Diesel (2K) tank (drive plate does not sit flush with drive).

NonSoc General UST

- | | | |
|-------------------------------------|-----------------|--|
| <input type="checkbox"/> | COMM 10.500.4.A | Access Manways - Required on UST systems installed after March 1991 |
| <input type="checkbox"/> | API 1615.11.2.5 | Fill Pipe to Extend to Within 6 inches of Tank Bottom |
| <input type="checkbox"/> | COMM 10.545.3 | Permanant Closure Substandard UST systems |
| <input type="checkbox"/> | COMM 10.560.2 | Permanent closure - cleaning & removal |
| <input type="checkbox"/> | COMM10.145.1 | Permit to Operate Required - Fed Reg Tanks |
| <input type="checkbox"/> | COMM 10.500.5.D | Secondary Containment at Tank Tops and Dispensers UST systems |
| <input checked="" type="checkbox"/> | NFPA 30.23.13.1 | Tight fittings - UST Tank Openings Other than Vents (fill caps, vapor caps, etc) |

“Connections for all tank openings shall be liquidtight and vaportight.

“

Tank System Maintenance Requirements

- PEI 100 – 1997 does not give any other options than a containment sump at the tank connection and at the dispenser connection.
- Due to adoption of earlier standard, sump containment has been required by Comm 10 on new systems installed after July 1, 2002.

However:

- Since April 1991 operators are required to maintain such equipment in functional condition
- Since April 1991 operators are required to maintain such equipment as required by the manufacturer.
- Since April 1991 inspectors are required to maintain regulatory oversight of such conformance / maintenance.



* Impaired Secondary Containment (Dispenser) - Conduit entry boot is damaged in #1/2 dispenser sump.



Effective Upgrade Dates

- Secondary containment for transfer operations – Dec 31, 2011
 - Comm 10.340(5)
- Secondary containment for Hazardous Substance ASTs – Dec 31, 2014
 - Comm 10.350(3)(j)2
- Secondary containment for Hazardous Substance operations – Dec 31, 2014
 - Comm 10.350(5)(b)1.b.
- Emergency shut-off for transfers – Dec 31, 2011
 - Comm 10.370
- Corrosion protection on underground piping from an AST – Feb 1, 2011
 - Comm 10.400(2)(c)
- Pipe connection at dispenser shall be in secondary containment – Dec 31, 2014
 - Comm 10.400(3)(d); Comm 10.500(5)(d)
- Leak detection for underground piping from an AST – Feb 1, 2011
 - Comm 10.400(4)(a)
- Containment for fill not located in dike – Feb 1, 2010
 - Comm 10.410(6)
- Overfill prevention on ASTs with fill pont not in dike – Aug 1, 2011
 - Comm 10.410(9)
- Periodic inspections of ASTs – Feb 1, 2010
 - Comm 10.440(1)
- Pipe connections at top of tank shall be in secondary containment – Dec 31, 2014
 - Comm 10.500(5)(d)
- Auto shut-off overfill protection – Feb 1, 2011
 - Comm 10.505(2)(b)

New IIRA Paragraphs

NonSoc	General UST	Water / Debris in spill bucket , sumps, dikes or interstice	COMM 10.230.10	T
SOC	Leak Detection	Annual Equipment Inspection Qualified Person	COMM 10.510.2	F
NonSoc	General AST	Catchment Basin Loading/Unloading ASTs >5000k	COMM 10.340.5	F
NonSoc	General AST	New & Replacement Shear Valve Must Be Double-Poppet	COMM 10.615.5.A	T
NonSoc	General AST	Corrosion Protection of Underground Piping on ASTs	COMM 10.400.2.C	T
NonSoc	Dispensers and Labeling	Dispenser Piping Secondary Containment -AST systems	COMM 10.400.3.D	F
NonSoc	General UST	Secondary Containment at Tank Tops and Dispensers UST systems	COMM 10.500.5.D	T
NonSoc	General AST	Corrosion Protection on AST Systems	COMM 10.400.2.A	T
NonSoc	General AST	Leak Detection for Underground Piping on ASTs	COMM 10.400.4.A	T
SOC	Spill and Overfill	New Overfill Prevention Requirements	COMM 10.505.2.B	T
SOC	Leak Detection	Sump Sensor - Improper positioning	COMM 10.230.10	T
SOC	Corrosion Protection	Failing sacrificial anode systems	COMM 10.520.2..B	T
SOC	Corrosion Protection	Inoperative impressed current systems	COMM 10.520.2.C	T
NonSoc	Dispensers and Labeling	Hose or fitting replacement	COMM 10.605.1.E.5	F
NonSoc	General AST	Existing AST Not Registered or Improperly Registered	COMM 10.140	F
NonSoc	General UST	Existing UST Not Registered or Improperly Registered	COMM 10.140	F
NonSoc	General UST	Failure to maintain records at UST site.	COMM 10.500.9..B.1	F
NonSoc	General UST	Inventory Verification (Retail facility)	COMM 10.503	F
NonSoc	General UST	Service Station Color Coding by product / tank	COMM 10.230.12..A.1	F
NonSoc	General AST	Bulk Plant - Requirement For Color Coding	COMM 10.340.2	F